

Application No: 10/506,761
Amendment C
Reply to Office Action Dated 10/26/2007

Attorney Docket No: 3926.103

REMARKS

Claims 1 and 3-19 were pending in the application. Claim 2 was previously cancelled. New claims 20-22 are added.

New claim 20 (a) refers to “an axle carrier upon which the engine is mounted”, this being descriptive of the element shown in the figures, and is supported by the first line of paragraph [0008] of the specification (“Fig. 1 shows an axle carrier ... engine is mounted thereon ...”), and (b) recites “liner” rather than “lining”, it being submitted below that “liner” is a more fitting term as discussed in greater detail below.

New claim 21 depends from claim 20 and recites that the liner may be screwed, glued or clipped to the axle carrier as disclosed in paragraph [0008] of the specification.

New claim 22 depends from claim 1 and recites that (a) the lining is pre-manufactured and (b) attached to the axle carrier via screws, glue, or clips.

Entry is respectfully requested.

Definition of “liner” and “lining”

Before discussing the art rejections, Applicants would like to clarify the meaning of the term “liner” and “lining”, as the meaning given to these terms has bearing on the scope of the claims and thus to relevancy of prior art.

That is, the Examiner interprets “lining” as including paint. While Applicants maintain that it is clear from the specification that the term is used in a narrower sense, Applicants add new claims 20 and 21 using the term “liner”. A search of the term “liner” in claims of US Patents resulted in: truck bed liner, kitty litter box liner, swimming pool liner, garment liner, footwear liner, disposable paint tray liner, disposable grill liner, helmet liner, basket liner, casket liner, freezer bag liner, landfill liner, ditch liner, plant container liner, food container liner, cylinder head liner, etc. In each of these uses, the term “liner” would be considered a separate element, and would not be interpreted to include paint. That is, a truck bed is painted, but this paint is not understood to be a liner. A separate tough shell placed in a truck bed is understood

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to be a liner. In this sense, the liner of the present invention is considered to be a separate important element, having heat and sound insulating properties.

See the specification para. [0008]: "In this illustrative embodiment, the protective lining is screwed to the axle carrier 1 at fastening points 6. However, the lining 5 can also be glued or clipped on the axle carrier 1." This sounds like a liner, not a paint layer.

Further disclosed in para. [0008] is that while a multi-piece lining may be used, a single piece lining is preferred to reduce the number of fastening points. This description conveys to the reader the image of a liner, not paint.

Further, claim 14 indicates that the lining (5), with the exception of fastening points (6) for fastening the lining (5) to the axle carrier (1), is distanced from the axle carrier by an air gap (14). Paint can not be distanced from the supporting member by an air gap. That would destroy the function of the paint (or undercoating).

Accordingly, separate consideration of claims 20 and 21 is requested in view of the term "liner".

Claim Rejections - 35 U.S.C. § 103

Claims 1-4, 12-13, 15-16, and 19 are rejected under 35 USC 103(a) as being unpatentable over von der Ohe et al. (US 4,453,740), describing an axle carrier, together with the Examiner's official notice that such elements have been painted and undercoated.

Claims 1-3, 5-14, and 16-18 are rejected under 35 USC 103(a) as being unpatentable over von der Ohe et al. in view of Illbruck et al. (US 5,633,067), teaching use of sound insulating panels in the walls of engine compartments.

Applicants respectfully submit that

(a) the liner of the present invention is not only sound absorbing as taught by Illbruck et al, but heat-and-sound insulating,

(b) the liner is not provided on the walls of an engine compartment as disclosed in Illbruck et, but is provided directly on the axle carrier itself,

(c) the attachment of a pre-manufactured lining or liner to the axle carrier (claims 20, 22)

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is not taught in Ohe et al,

(d) modifying Ohe et al to providing an air gap (claim 14) between "lining" (paint or undercoating) and axle carrier would destroy the invention of Ohe et al, and

(e) the advantages of providing a heat-and-sound insulating liner on an axle carrier produces significant and unobvious benefits not disclosed in or suggested by either of these references.

For example, as disclosed in paragraph [0006] since the axle carrier is now protected from engine heat, "because of the protective lining, the actual axle carrier body can be safely made from lightweight materials, such as aluminum, for example, which are sensitive to high temperatures". If made of steel, the axle carrier can be made thinner. Further, if the heat insulation is particularly good, it is advantageously conceivable to dispense with the heat shields, normally applied in the engine compartment and consisting of aluminum plates, for the exhaust gas lines, thereby saving on costs and space (paragraph [00012]).

Such advantages are not inherent in the painted or undercoated axle carriers of Ohe et al. The liner of the present invention provides protection well beyond the negligible heat protection afforded by a paint layer. This benefit is not obvious from a combined reading of primary and secondary references.

Applicants point out that the lining of Illbruck et al is applied exclusively to a wall element (col. 1, line 45 and line 50) of an engine compartment. Since Illbruck et al is limited to sound insulating panel on a wall of an engine compartment, and since there is no teaching that would lead one to (a) making the sound insulating material also heat insulating, and (b) relocating the material to the (preferably upper surface) of the axle carrier, these references in combination do not reach the present invention.

Regarding claim 5 (wherein the material of the lining (5) comprises two interconnected plastics, the one plastic exhibiting sound-insulating properties and the other plastic exhibiting heat-insulating properties), no such lining or liner is taught in the primary or secondary reference. Thus, this claim is independently considered to be allowable.

Regarding claim 14 (wherein the lining (5), with the exception of fastening points (6) for

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fastening the lining (5) to the axle carrier (1), is distanced from the latter by an air gap (14)) the Examiner considers that Illbruck et al teaches in Fig. 2 item 7 that the lining may be distanced from the axle carrier by an air gap.

There is however no mention in Illburck et al of relocating the sound absorbing, noise reducing material to a vehicle component corresponding to an axle carrier.

There is no mention in Illburck et al of changing the property of the sound absorbing, noise reducing material to a heat-and-sound insulating material.

If one were to combine the teachings of these two references and modify the paint or undercoating of Ohe et al so that there is an air gap between the undercoating and the structure, the material would not provide the corrosion protection of Ohe et al, and the invention of Ohe et al would be destroyed. Thus, such modification is not permissible.

Thus, claim 14 is independently considered to be allowable.

Regarding new claim 21, these references in combination do not suggest that the protective lining is screwed, glued or clipped to the axle carrier (1) at fastening points (6).

Accordingly, the present invention makes it possible to use very powerful engines without unduly increasing the loads upon the regions of the vehicle adjacent to the engine compartment and upon the outside world. This is accomplished by providing a heat and noise absorbing liner or lining on the (upper side of the) axle carrier on which the engine is mounted (claim 24) or protruding component surrounding the engine (claim 1). Claim 24 is added to use the term "liner which is believed to better convey the element intended to be covered by the claim.

While the Examiner considers every material to inherently possess heat and sound insulating properties, applicants respectfully submit that those of ordinary skill in the automobile art would not consider a sheet of steel to be a heat insulator, or air to be a sound insulator. Properties are relative, and for a material to be recognized as a heat or sound insulator, it must demonstrate these properties. Illbruck et al. also do not disclose that a plastic having the heat-insulating properties is disposed above a plastic having the sound-insulating properties, as recited in claim 6.

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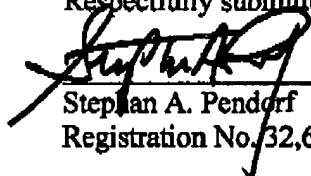
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Accordingly, withdrawal of the rejection is respectfully requested.

The Commissioner is hereby authorized to charge any fees which may be required at any time during the prosecution of this application without specific authorization, or credit any overpayment, to Deposit Account Number 16-0877.

Favorable consideration and early issuance of the Notice of Allowance are respectfully requested. Should further issues remain prior to allowance, the Examiner is respectfully requested to contact the undersigned at the indicated telephone number.

Respectfully submitted,


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